Revised 5/23/2014 (effective Fall 2014)

PURDUE UNIVERSITY

Materials Engineering

College of Engineering

code-BS-MSE
Code-XXX
126 Credits for Graduation
Students must have a graduation index of 2.0
Student must have a minimum average GPA
of 2.0 in MSE 200 and 300 level courses

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Materials Engineering Major Courses (42 credits) **(https://engineering.purdue.edu/MSE/Academics/Undergrad/undergrad_manual.pdf)**

Required MSE Courses (42 credits)

_____ (3) MSE 23000- Structure and Properties of Materials
_____ (3) MSE 23500 – Materials Properties Lab
_____ (0) MSE 39000 - Seminar
_____ (3) MSE 25000- Physical properties in Engineering Systems
_____ (3) MSE 26000- Thermodynamics of Materials
_____ (3) MSE 27000- Bonding and Crystallography
_____ (3) MSE 33500 – Material Characterization Lab
_____ (3) MSE 37000 – Elec, Opt, Mag Props. of Materials
_____ (3) MSE 33000 – Proc. and Props. Of Matls.
_____ (3) MSE 34000 – Transport Phenomena
_____ (3) MSE 36700 – Materials Processing Lab
(3) MSE 38200 - Mechanical Response of Materials
(3) MSE 43000 – Materials Processing and Design I
(3) MSE 44500 – Materials Engineering Systems Analysis
(3) MSE 44000 – Materials Processing And Design II

MSE technical Electives - (18 credits)

_____ (3) Technical Elective I
_____ (3) Technical Elective II
_____ (3) Technical Elective III
_____ (3) Technical Elective IV
_____ (3) Technical Elective V
_____ (3) Technical Elective VI

Other Departmental /Program Course Requirements (48 credits)

_____ (4/5) *MA 16500/16100 – Calculus I (Satisfies FYE requirement)*
_____ (4/5) MA 16600/16200 – Calculus II*(Satisfies FYE requirement)*
_____ (4) *CHM 11500 – General Chemistry I*
_____ (4) *CHM 11600 – General Chemistry II*
_____ (2) *ENGR 13100* - Transforming Ideas to Innovation I*(Satisfies FYE requirement)*
_____ (2) *ENGR 13200* - Transforming Ideas to Innovation II*(Satisfies FYE requirement)*
_____ (4/3) ENGL 10600 – English Composition or equivalent (3 credits) *(Satisfies FYE requirement)*
_____ (3) *COM 11400*- First-Year General Education Elective (required)
_____ (4) *PHYS 17200- Physics I(Satisfies FYE requirement)*
_____ (4) MA 26100 – (satisfies Math and physics requirement)
_____ (3) MA 26500- (satisfies Math and physics requirement)
_____ (3) MA 26600 - (satisfies Math and physics requirement)
_____ (3) PHYS 24100 - (satisfies Math and physics requirement)
_____ (1) PHYS 25200 – Elec and Optics Lab
_____ (4) CHM 25700 – Organic Chemistry

NOTE: COM 114 is a 'highly recommended General elective and is counted separately from the 18 credits of Gen Ed requirement. Therefore the Gen Ed requirement is 18 + 3 credits = 21 when including COM 114

General Electives (18 credits)

_____ (3) G.E.-I	_____ (3) G.E.-IV	_____ ( ) _____	_____ ( ) _____
_____ (3) G.E.-II	_____ (3) G.E.-V	_____ ( ) _____	_____ ( ) _____
_____ (3) G.E.-III	_____ (3) G.E.- VI	_____ ( ) _____	_____ ( ) _____

University Core Requirements

Human Cultures Humanities ☐ _____	*Science, Technology & Society Selective* ☐ _____
Human Cultures Behavioral/Social Science ☐ _____	*Written Communication* ☐ _____
Information Literacy ☐ _____	*Oral Communication* ☐ _____
Science Selective ☐ _____	*Quantitative Reasoning* ☐ _____

Science Selective ☐ _____

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The student is ultimately responsible for knowing and completing all degree requirements.

Degree Works is knowledge source for specific requirements and completion

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Materials Engineering

https://engineering.purdue.edu/MSE/Academics/Undergrad/Advising/PlanofStudy.pdf

Suggested Arrangement of Courses:

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
4	MA 16500		4	MA 16600	MA 16500
4	CHM 11500		4	PHYS 17200	
4 (3)	ENGL 10600 (or equivalent (3))		4	CHM 11600	
2	ENGR 13100		2	ENGR 13200	ENGR 13100
			3	COM 11400	
14 (13)			**17**		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
3	MSE 23000	CHM 11500, MA 16500	3	MSE 25000	PHYS 17200,MSE 23000, MA 26500
3	MSE 23500	CHM 11500, MA 16500	3	MSE 26000	MA 26100,MSE 23000
4	MA 26100	MA 16600/ 16200	3	MSE 27000	MA 26100,26500,MSE 23000
3	PHYS 241000	PHYS 17200	3	MA 26600	
3	MA 26500	MA 16200/16600	3	General Elective I	
0	MSE 39000		1	PHYS 25200	
			0	MSE 39000	
16			**16**		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
3	MSE 33500	MSE 23500/29200	3	MSE 33000	MSE 260
3	MSE 34000	MA 26600	3	MSE 36700	MSE 330
3	MSE 37000	MSE 23000	3	MSE 38200	MSE 25000, MA 26500
4	CHM 25700		3	Technical Elective I	
3	General Elective II		3	General Elective III	
0	MSE 39000		0	MSE 39000	
16			**15**		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
3	MSE 43000	MSE 335, 367	3	MSE 44000	MSE 33500,34000, 37000,43000
3	MSE 44500	MSE 33000, 34000,43000	3	Technical Elective IV	
0	MSE 39000		3	Technical Elective V	
3	General Elective IV		3	Technical Elective VI	
3	Technical Elective II		3	General Elective V	
3	Technical Elective III		3	General Elective VI	
15			**18**		

126 semester credits required for Bachelor of Engineering degree.
Students must have a graduation index of 2.0

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